PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in or relating to the Construction of Walls and the like

I, JULIUSZ EUGENIUSZ TURCZAN, of 23, Wolnosci, Krolewska Huta, Poland, Polish Nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained, in and by the following statement:—

This invention relates to a wooden wall construction to be used for the erection of stationary, as well as of portable buildings that can be taken to pieces, as for instance small dwelling houses, barracks, and the like, the wall being in every case built up of wooden blocks which are preliminarily shaped and pre-worked for the purpose in view, and are assembled in bond-like manner and connected by members holding them securely together, but permitting also the walls to be taken to pieces easily and quickly if that should become requisite.

According to the invention, wooden walls for stationary buildings and for portable ones especially such that can be taken to pieces, are composed of shaped wooden blocks of three different forms and of connecting members for the same, with the blocks of two of the forms constructed in different lengths, and the blocks of one form having a vertical groove at each end, those of the second form having a vertical groove in the one end and a horizontal slot in the other end, and those of the third form having a vertical groove in the one end and a horizontal tongue at the other end, the blocks being assembled and connected together by the interfitting of the horizontal tongues and horizontal slots and by feathers fitting into the cooperating vertical grooves on the end faces of adjacent blocks whereby interconnection of the ends of the blocks is provided over the whole area of the walls, including corner constructions.

With the thus prepared wooden blocks, wood walls for the above-stated purposes can be erected by unskilled hands in a very short time with the aid of simple plans and simple building prescriptions, and the product will be good-looking walls with smooth surfaces which excel by far ordinary board walls and round-timber walls.

The finished blocks can be easily stored in a comparatively small place, and it is quite possible to transport them to places lying remote from railways and roads, as they are more easy to convey them boards and poles.

It is suited to the purpose in view, especially with respect to the water-tightness of the wall, to make the upper surface of the blocks convex and the lower surface correspondingly concave, whereas the lateral surfaces remain plane, the concave surface receiving the convex ones when the blocks are placed upon one another in staggered arrangement and in bond-like manner.

The blocks can be manufactured on mass production principles from pine wood and the like, care being taken that the wood is hard and of uniformly good quality. Rods which extend through vertical bores of the blocks may consist likewise of wood or of metal, and the feathers may be made from the waste obtained when the blocks are provided with the above-mentioned grooves, slots and tongues.

The invention is illustrated diagrammatically and by way of example on the accompanying drawing, on which Figs. 1, 1^a, 2, 2^a, 3 and 3^a are perspective representations of individual wooden blocks of different lengths and different design (at their ends); Fig. 4 is a perspective representation of a feather; Figs. 5 and 6 both show a portion of a vertical rod for connecting the blocks together; and Fig. 7 is a perspective representation of walls built up of wooden blocks designed according to this invention.

The Figs. 1-3^a show three pairs of blocks, each pair consisting of a longer member or mate (a, Fig. 1; b, Fig. 2; c, Fig. 3) and of a shorter member or mate (a_1, Fig. 1^a, b_1, Fig. 2^a, c_1, Fig. 3^a). The blocks a and a_1 have at their ends vertical grooves 1 and 2; the blocks b and b_1 have at one end a vertical groove 4 and at the other end a horizontal tongue 5 with a bore 6, and the blocks c and c_1 have at one end a vertical groove 7 and at the other end a horizontal slot 8. The tongues 5 of blocks b, b_1 can engage the

slots 8 of blocks c, c_1 to form a corner construction and where there are these slots, there bores 9 are provided which lie co-axially with the bores 6 of the tongues 5 when these members engage the slots, whereafter rods g are inserted into the superposed bores, as in Fig. 7.

When the blocks are being assembled in order to make a wall, they are built up in staggered arrangement, as in Fig. 7. In this position they are connected with one another by feathers d (Fig. 4) inserted into the grooves or, more precisely, into the pairs of grooves in the contacting and faces of the blocks. In this way all parts are very securely connected with one another, and also the superposed layers of the blocks are firmly connected with one another by the rods f (Fig. 5) which are put into and through bores 3 provided in the blocks, there being, for instance, only one bore, as in the short blocks, or two bores, as in the long blocks. It is easily possible to take the wall to pieces by withdrawing the members d, f and g, as will now be clear without a more detailed explanation.

The end faces of the blocks abut, of course, against one another and their grooves lie then just opposite to one another. All these faces, i.e. those of the blocks and those of the end grooves, are vertical, and the sectional area of each pair of grooves is equal over the length thereof. The feathers have practically the same sectional area and they fit, therefore, accurately into the pairs of grooves whereby very good tightening of the blocks at their joints is obtained. It is practically impossible that moisture can penetrate from the outer side of the wall to the inner side thereof.

The top surfaces of the blocks are preferably convex and the bottom surfaces are then correspondingly concave, as shown at a_2 and a_2 in Figs. 1 and 1a, at b_2 and b_2 in Figs. 2 and 2a, and at c_2 and C_2 in Figs. 3 and 3a. This configuration of the blocks affords a further security against penetration of moisture.

In building up a wall according to this invention, first a foundation h (Fig. 7) of concrete or bricks or other stones is produced, and a layer i of tar, tarred paste-board, or another waterproof material is laid upon that foundation, and then the blocks are built in their proper succession, but prior thereto the cavities in the bottom surfaces of the lowermost layer of blocks are filled up with concrete or cement k (Fig. 7). In this way walls that are located at right angles with respect to one another are erected, as shown in Fig. 7, and wherever contacting blocks or portions of them should, perhaps, not fit accurately together this can be quickly corrected by means of a hand saw or other suitable tool.

The blocks a_1 can be used in positions where a block a would be too long.

The length of the tongues 5 corresponds with the breadth of the blocks which is necessary for making corners, and is likewise suited to the purpose in view to make the length of the blocks a multiple of the breath of the same, say the two-fold or the three-fold or the four-fold or so. This facilitates providing in the walls the apertures requisite for doors and windows, or for the frames of the same respectively. Finally, it is also suited to the purpose in view to manufacture the blocks in standard units or sizes, for instance 14 x 14 x 56 cm or 15 x 15 x 60 cm. or 16 x 16 x 64 cm. etc. As a rule, the blocks employed for a wall should all have the same unit size which facilitates the building up of the walls.

The blocks may all have the same sectional transverse area.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Wooden walls for stationary buildings and for portable ones, especially such that can be taken to pieces, and being composed of shaped wooden blocks of three different forms and of connecting members for the same, with the blocks of two of the forms constructed in different lengths, and the blocks of one form having a vertical groove at each end, those of the second form having a vertical groove in the one end and a horizontal slot in the other end, and those of the third form having a vertical groove in the one end and a horizontal tongue at the other end, the blocks being assembled and connected together by the interfitting of the horizontal tongues and horizontal slots and by feathers, fitting into the cooperating vertical grooves on the end faces of adjacent blocks whereby interconnection of the ends of the blocks is provided over the whole area of the wall including corner constructions.

2. Body blocks for forming wooden walls as claimed in claim 1, each block having a vertical bore or vertical bores, for the reception of a rod or rods when the blocks are arranged in bond-like manner.

3. Body blocks for forming wooden walls as claimed in claim 1, each block having a convex top surface and a correspondingly concave bottom surface, as set forth.

4. Body blocks for wooden walls as

claimed in claim 1, said blocks all having the same sectional transverse area, as set forth.

5. Body blocks for wooden walls as claimed in claim 1, the length of each block being a multiple of its breadth, as set forth.

6. Body blocks for walls as claimed in claim 1, wherein a bore is provided in each of the horizontal tongues of the third pair of blocks and a corresponding bore is provided in the horizontally slotted portion of the blocks of the second pair, such bores being aligned when the blocks are interfitted and being adapted to receive a vertical rod.

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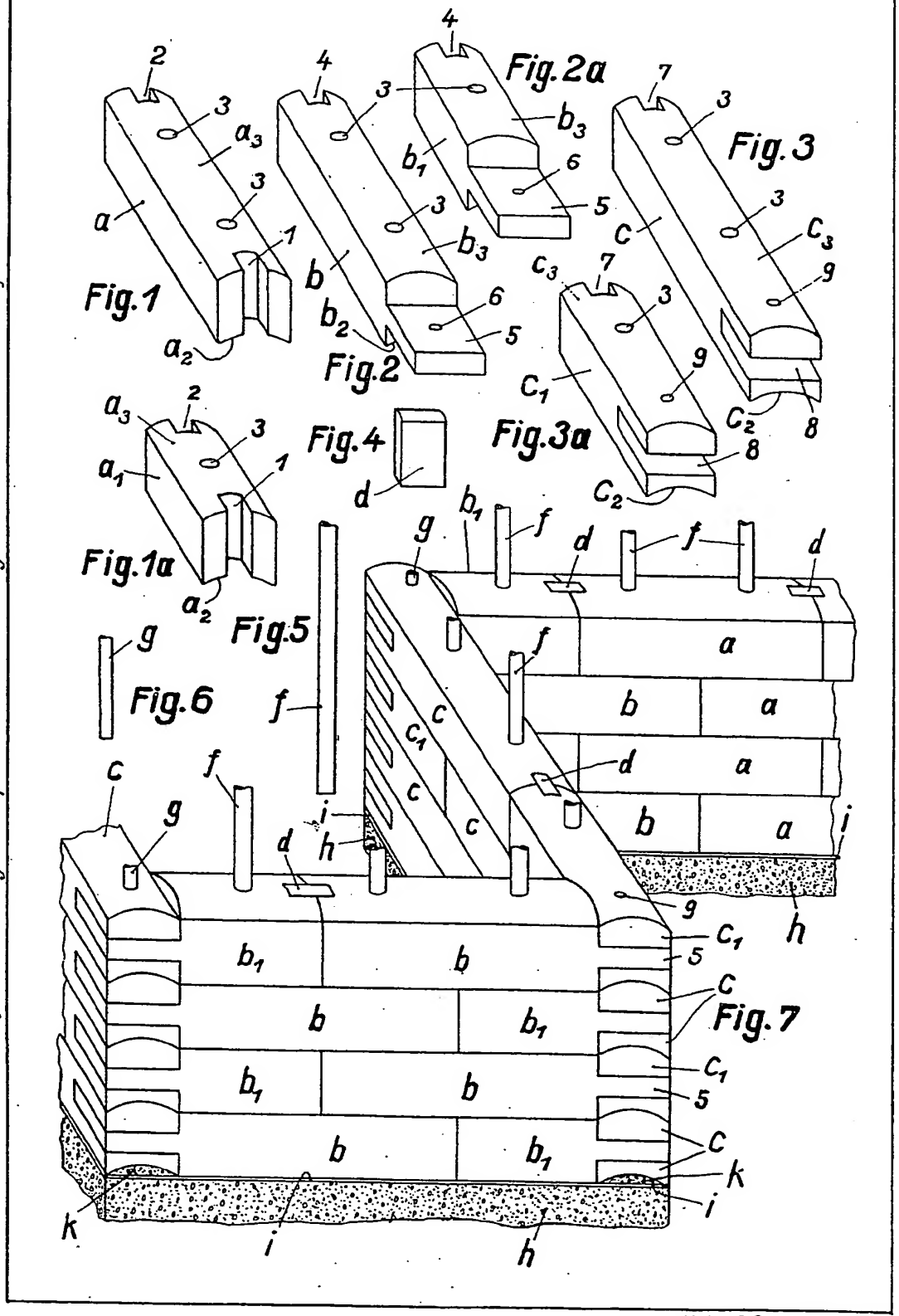

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